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ABSTRACT

This document discusses the effects of inflation on colleges and universities. It attempts to explain the basic nature of the current financial problem so that more informed policy decisions can be made. The document discusses the effect of inflation on costs and the effects of inflation/recession on revenues. Chart 1 indicated the Halstead Higher Education Price Index has risen at an appreciably faster rate over the last 10 years (about 5.3 percent per year, on the average) than either the Consumer Price Index (about 3.6 percent per year) or the Gross National Product Deflator (about 3.5 percent per year). This pattern is consistent with the long-term tendency for the cost of education to rise more rapidly than prices in general--a phenomenon due principally to the labor-intensive nature of higher education and the greater difficulty in achieving productivity gains in education than in the economy generally. (Author/KE)

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THE REGENTS ELEVENTH ANNUAL TRUSTEE CONFERENCE
ON
THURSDAY, MARCH 13, 1975
NEW YORK HILTON HOTEL

AN ADDRESS BY:

WILLIAM G. BOWEN
PRESIDENT
PRINCETON UNIVERSITY

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THE EFFECTS OF INFLATION/RECESSION ON HIGHER EDUCATION*

It is a privilege to be invited to address this distinguished group on a subject that is terribly important to all of us if not quite as lively or as entertaining --- or even as uplifting --- as some others we might think of. My assigned topic, as you know, is the effects of inflation on colleges and universities, and it may well seem to many of you, as it does on occasion to me, to be a subject sufficiently depressing to merit crying about rather than talking about. But we do need to do more than just feel sorry for ourselves and the institutions with which we are associated. We need to understand as well as we can the basic nature of our current financial problem so that we can explain it more or less intelligibly to others and make reasonably informed policy decisions ourselves. That is my justification, at any rate, for offering some rather simple and straightforward observations this morning.

The Seriousness of the Problem

To begin at the end, there should be no question in anyone's mind about the seriousness of the overall financial problem faced by higher education in the

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*I am indebted to Mr. James Klumpner, a graduate student in the Woodrow Wilson School of Public and International Affairs at Princeton, for his help with the data presented in this paper.

United States today as a direct consequence of the state of the economy. To be sure, the financial health of a college or university cannot be measured simply and objectively by recourse to a statistic like earnings per share. As the U.S. National Commission on the Financing of Postsecondary Education noted in its Report: "Perhaps the only unequivocal proof of financial distress among educational institutions is their actual demise." That is, however, a rather draconian test, and the fact that most institutions manage somehow or other to balance their budgets and to survive is a source of only limited encouragement --- at least to me.

When I first started to work on this talk I accumulated a folder full of reports of serious financial strain at institutions both public and private, well endowed and poorly endowed, large and small, some in a tenuous financial equilibrium, some not, seeking to meet a wide variety of important educational and scholarly needs. There is not time this morning to give you more than a tiny sample of that material if I am to stick with my main assignment.

Among the major private universities (the group of institutions with which I am most familiar), Brown has had to withdraw more than $25 million from endowment to fund current operations since 1968-69, leaving only about $18 million in accounts from which further withdrawals can be made. As a consequence, President Hornig has had to announce his intention to reduce the faculty by 75 positions over the next few years, to reduce the budget for scholarships and fellowships in the face of sharply rising charges, to curtail the library budget, and so on. President Corson has estimated that over the next three years Cornell must reduce by 15% that portion of its budget supported by unrestricted funds. Even Harvard, the best endowed of the major private universities, has reported an unrestricted operating deficit for the Faculty of Arts and Sciences of $1.4 million for 1973-74 and has projected an even larger shortfall this year. In a speech given less than a month ago in New York, President McGill of Columbia reported the need to close a potential gap of $5 million between costs and resources in 1975-76 which, extrapolating the trends, could grow to $35 million by 1980.

The smaller private colleges, which make invaluable contributions to American higher education but which for the most part can call upon neither

sizeable endowments nor extensive research funds, are also gravely threatened by the current economic climate. Because of a concern that they may jeopardize existing support, some of these colleges are reluctant to discuss their economic problems publicly. That is, in my view, unfortunate though understandable. In any event, we know that in some cases these colleges have been forced to reduce expenditures drastically, to compete aggressively to maintain or increase enrollments, and to eliminate effective programs. Some have had to close. Even very strong colleges such as Carleton in Minnesota have had to increase student charges by a greater amount than ever before and to reduce faculty and staff positions.

As those of you in this room know all too well, the public sector has enjoyed no immunity from the effects of inflation. In the face of declining state revenues, some states have cut back their 1975 appropriations in mid-year, and the outlook for next year, with few exceptions, is far from sanguine. By June 30, the State University system of Florida has to cut spending by $6.3 million --- or 2.6% of its total 1974-75 state appropriation. The state universities in Arizona face a 5% cut in expenditures this spring and a similar cut again next year. The University of Connecticut, which has experienced a 2.4% decrease in its faculty but a 3.3% increase in its student population over the past three years, learned in January that its budget for the current year was being cut 2½%. The University of Vermont, which already has eliminated over 100 faculty positions and intercollegiate football to save $1.5 million, has had $300,000 of its 1975 appropriation impounded and has learned that there will be no increase next year. And the University of Michigan, where appropriation increases of 5-6% over the past three years plainly have not kept pace with inflation, now faces a 1.5% cut in its state appropriation this year and another 2.5% cut next year. More generally, public institutions throughout the country have been cutting back on hiring and promotions, limiting purchases of equipment and supplies, deferring maintenance, and delaying new projects and programs.

Effects of Inflation on Costs

The fact that all elements of higher education are in such serious financial difficulty, all at the same time, suggests the pervasive nature of the underlying

pressures. Most visible and most significant has been the pressure exerted on the expenditure side of educational budgets by the inflation of the last few years.

How are we to measure the extent of that pressure? The effects of inflation on a particular sector depend, of course, on the rates of increase in the prices of the particular combination of goods and services bought by the sector in question. "Inflation" never means that all prices are going up at the same rate, and no single, overall measure of inflationary impact (such as the implicit price deflator for the Gross National Product) should be assumed to be appropriate for any particular sector of the economy. Recognition of the need to develop disaggregated measures of inflationary impact has led to the construction of a number of specialized price series including at least five price indexes designed with all or part of higher education in mind. The American Council on Education's Office of Administrative Affairs and Educational Statistics has converted all five indexes to a common base year (1963-64), and it is interesting to note that there is reasonably close congruence among them. All five show a much greater inflationary impact on higher education over this period than on the economy at large (taking the GNP implicit price deflator as the measure for the economy at large), a key comparison to which I want to return in a moment.*/ Nor do I believe, for reasons that I shall also explain shortly, that even these indexes reflect fully the inflationary pressures which we have felt.

The Higher Education Price Index (HEPI) constructed by D. Kent Halstead has an advantage over the other indexes for higher education in that it is based on the finest breakdown of expenditure categories and is the least dependent on ad hoc weighting systems.**/ For these reasons it is the index for higher education to which I shall refer from here on.

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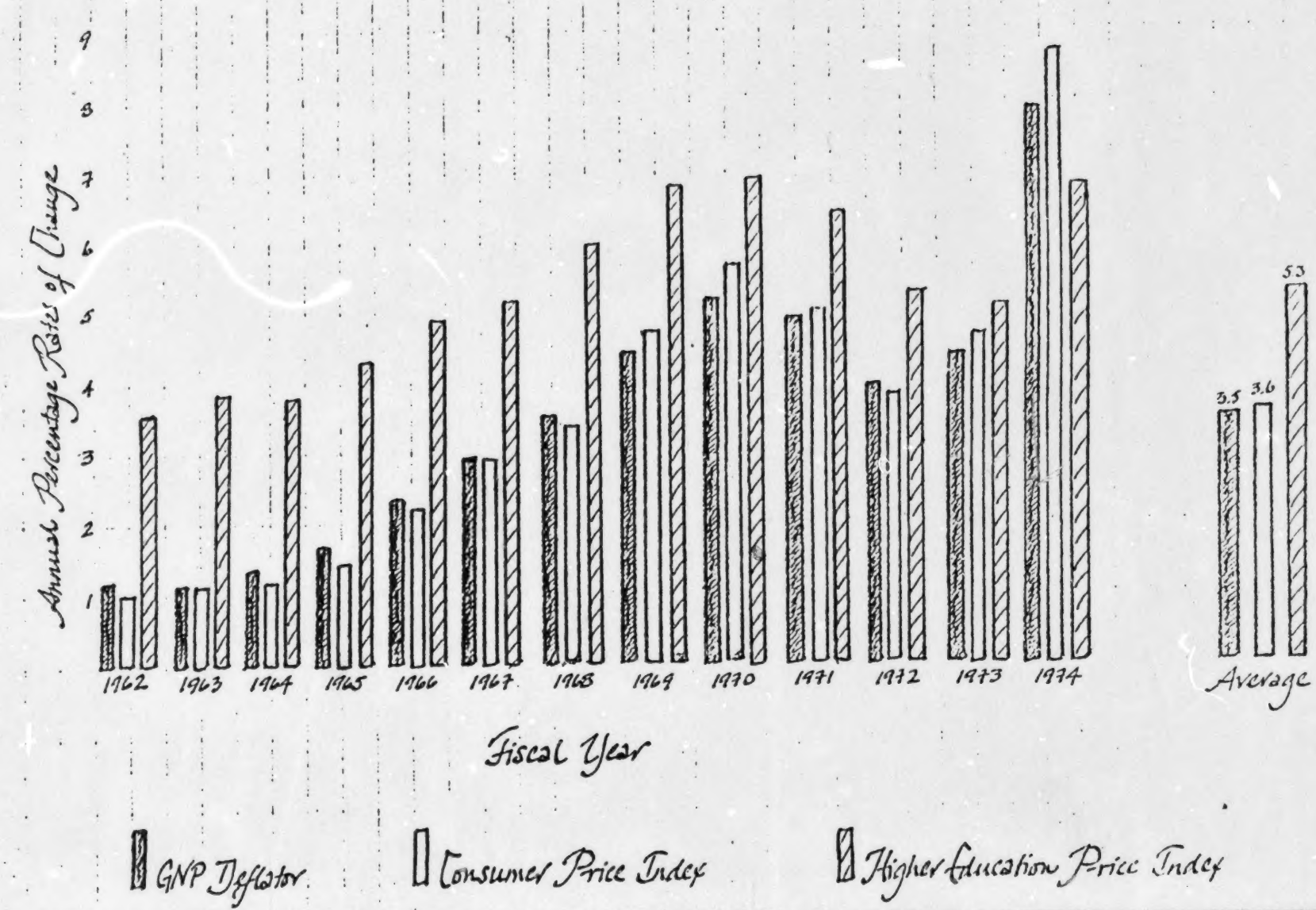
* See Higher Education and National Affairs, November 22, 1974, p. 5.

** The index we are using here differs slightly from the index described in Halstead's book Statewide Planning in Higher Education. It has been revised by Halstead to refine further the components, but the basic concepts and approach are as described in his book. We are grateful to Mr. Halstead for providing us with the numbers for his new index, and with other helpful information.

CHART I

Comparison of Higher Education Price Index (HEPI) with Consumer Price Index (CPI) and GNP Deflator (GNPD);
Annual Percentage Rates of Change from Prior Year, Fiscal Years 1961-62 through 1973-74



As Chart 1 indicates, the Halstead Higher Education Price Index has risen at an appreciably faster rate over the last ten years (about 5.3% per year, on the average) than has either the Consumer Price Index (about 3.6% per year) or the Gross National Product Deflator (about 3.5% per year). Lest anyone underestimate the magnitude of this differential, let me translate it into other terms: whereas prices in general have risen about 50% over the last decade, the cost of higher education, as approximated by this index, has risen over 75%. This pattern is consistent with the long-term tendency for the cost of education to rise more rapidly than prices in general --- a phenomenon due principally to the labor-intensive nature of higher education and the greater difficulty in achieving productivity gains in education than in the economy generally.

Recognition of this tendency for education, like other "services," to become relatively more expensive over time is fundamental to any understanding of the long-term problems of financing higher education. Having discussed this aspect of the economic problem of higher education in a study I did for the Carnegie Commission in 1968,*/ I shall say no more about it this morning --- except to urge that in our concentration on the special, exacerbating problems that we face right now, we not lose sight of our long-term problem. It would be comforting to think that all would be well for the financing of higher education if only the national economy would behave "properly" again, with less inflation and less unemployment; but that would be an entirely unwarranted assumption.

In terms of our immediate concerns, however, it is the rates of increase in the various indexes between 1973 and 1974 that is of greatest interest. Here we see that, in sharp contrast with the long-term experience, both the Consumer Price Index and the Gross National Product Deflator rose faster than the index for higher education, with the Consumer Price Index approaching the "double-digit" barrier. Without intruding too much on territory already covered, and covered much more ably than I could have covered it, let me suggest that the main part of the explanation lies in the very special nature of the recent price increases, with the rising retail prices of food alone making up almost one third of the total

* William G. Bowen, The Economics of the Major Private Universities, 1968.

increase in the CPI between calendar 1973 and 1974 and with increases in the prices of purchased energy making up nearly half of the total increase.*/

The fact that the higher education index (uncharacteristically) rose less rapidly than the broader-based price indexes over the last year or so should not obscure how rapidly it did rise. It went up 6.8% between 1972-73 and 1973-74, and this is the second highest year-to-year change observed over the last decade. (Between 1969 and 1970, the index rose 7.0%.) Needless to say, for many colleges and universities income from traditional sources did not go up anything like this rapidly, and that is a major reason for the deficits noted earlier.

Nor, as I indicated a moment ago, do I believe that the higher education price index itself has captured the full impact of inflation on our institutions over these last few years. The HEPI is dominated by movements in personnel costs (82% of all costs reflected in the index), in part because of the exclusion of "auxiliary activities" (mostly dormitory and food service expenditures). Auxiliary activities are excluded on the grounds that they are generally self-supporting (which, unhappily, is not always true). In any case, excluding these activities is questionable if expenditures of this kind are thought to be related to basic educational purposes and if our objective is to know how rapidly the prices of all inputs into the process of higher education have been rising. The costs of food services and of dormitories are, of course, affected significantly by the prices of food and fuel, and it is for this reason that, in the economic climate of the last two years, excluding auxiliary activities is almost bound to conceal the full impact of inflation on our institutions.

There is another respect in which the treatment of fuel costs may cause trouble for the index. In the HEPI fuel costs receive a weight of only 3%, which may be a source of difficulty in its own right. Perhaps even more serious is the fact that the index assumes that there is no change over time in the relative importance of different kinds of fuel. Thus, the index cannot reflect higher fuel costs forced upon institutions (including, I might note, my own) by the unavailability

* Economic Report of the President, February 1975, p. 48.

of natural gas, which in turn has required a shift in the mix of fuels toward oil, a source of energy roughly three times as expensive as gas. John F. Embersits of Yale University emphasized the significance of this "shift effect," among other points, in testifying before the Senate Commerce Committee on the potential effect of new oil import fees on colleges, universities, and other non-profit organizations. He noted that prior to the proposed new fees, Yale's annual energy bill rose from $2.4 million in 1969-70 to $8.7 million in 1974-75.

There is one other important reason why I believe that the Halstead higher education index (or any index constructed in a similar way) is almost bound to understate the effects of inflation on colleges and universities in a period such as this. I refer to salary levels and salary policies in educational institutions. The essential point is that salary decisions in colleges and universities, especially over relatively short periods, are at least as much a result of the financial problems affecting higher education as they are an indication of the magnitude of upward pressures on costs. While it is true that "ability to pay" affects wage determination in many sectors of the economy, I suspect that wages and salaries---and especially faculty salaries---are particularly sensitive to this consideration in educational institutions. A fair amount of empirical observation supports this conjecture, as does the collegial nature of most colleges and universities, the commitment of many faculty members to their institutions and to goals that may inhibit raising revenue to its maximum level (e.g., maintenance of student aid expenditures and "reasonable" levels of tuition), and, finally, the relatively insulated nature of some academic markets.

Thus, at a time of real financial stringency, it should not be surprising to find faculty salaries rising less rapidly than wages and salaries in general. The figures for the last few years support this inference. Between 1970 and 1973, the index of average faculty salaries compiled by the AAUP rose a total of only 12.8%, whereas the rate of increase for wage and salary workers in general was 19.7%. Preliminary data for fiscal year 1974 suggest that faculty members did a bit better than in the immediately preceding years (especially in public institutions),

but it is unlikely that the final figures for 1974 will change the general pattern.*/

Under these circumstances it is no wonder that the last report by the AAUP on the economic status of the academic profession was titled "Hard Times." In the context of this discussion of problems created by inflation, my point is simply that indexes based heavily on the actual movements of faculty salaries already reflect, at least in part, the underlying financial distress, and for that reason they understate the real pressures being felt by academic institutions.

Effects of Inflation/Recession on Revenues

Having tried to describe for you some of the more or less direct effects of rising prices on the expenditures and the staffs of colleges and universities, I want now to shift gears if I may. I hope Commissioner Nyquist will bear with me if I broaden somewhat the topic he assigned me last November. Instead of considering only the effects of inflation on colleges and universities, I would like to consider also, albeit briefly, the effects of the significant declines in real income that have accompanied this particular inflation.

As any number of economists and other commentators have pointed out, what is really "special" about our current situation is that we are experiencing both a significant degree of inflation and a substantial amount of unemployment simultaneously --- with attendant declines in real income. It seems to me that the current plight of higher education can be understood only by looking at the effects of this overall situation on the revenue as well as the expenditure sides of our budgets. It is the inflation cum recession that is causing such serious difficulties for colleges and universities, as well as for those responsible for making economic policy --- and even for those of us still brave enough, or foolish enough, to continue trying to teach elementary economics.

* The figures for 1970-73 are from the AAUP Bulletin for the summer of 1974, p. 175. It is true that the relatively slower rate of increase over this period in academic salaries can also be attributed in some degree to the "softness" of academic labor markets in general. However, this "softness" is itself partly the result of the same basic economic problems, and it is hard to sort out the "pure" effect of lessened ability to pay from the derived effects reflected in reduced demand for academics.

Almost every source of revenue for private and public institutions has been affected. The burden of tuition, for example, is much harder for students and parents to bear in the face of unemployment and reduced real income. In an inflationary period characterized simply by excessive aggregate demand, it would be much easier for students and their families to pay the inevitably increasing charges imposed by educational institutions --- and this in turn would make it somewhat easier for the institutions to increase revenue from this source. Under present circumstances the fear of affecting both total enrollments and the composition of student bodies has some inhibiting effect on the rate of increase of student charges, as does a proper concern over the effects of increases on the well-being of the individuals affected most directly. This is a particularly serious problem for those colleges and universities already concerned about maintaining enrollment in the face of discouraging demographic trends.

A related problem is that the lack of increased revenue from other sources is forcing a number of institutions, and especially private institutions, to levy such large absolute increases in tuition and other charges that the differential between the dollar cost of attending private and public institutions is widening still further. As the recent report of the Carnegie Council points out, this is a worrisome development for the whole of American higher education, and it needs to be addressed by appropriate public policy measures.*/

As a resident of the State of New Jersey, where unemployment is about 10% and the Legislature is now confronting a gap estimated by the Governor at $487 million for fiscal 1976 after submission of an extremely austere budget, I can testify at first hand to the effects of the current economic situation on state and local finance. As I noted above, some states have been cutting their appropriations mid-year and most are seeking reductions in expenditures for the next fiscal year. Obviously colleges and universities receiving substantial parts of their operating budgets directly from their states are affected seriously by

* The Federal Role in Postsecondary Education, Unfinished Business, 1975-1980, report of the Carnegie Council on Policy Studies in Higher Education, 1975. The report notes that between 1960-61 and 1974-75 the average tuition charge at public institutions increased from $210 to $450, while average tuition charges at private institutions rose during the same period from $856 to $2,241. Moreover, at many of the more selective private colleges and universities, tuition is much higher.

developments of this kind, as I hardly need tell anyone here today. It should also be noted that many private colleges and universities also benefit from state support for student aid and, in some cases, from other programs as well, including grant programs designed to recognize differentials in tuition levels. Federal Government expenditures for higher education, which affect both public and private institutions, have also been under serious pressure and have not come close to keeping up with inflation.

Current economic conditions have also had a very serious adverse effect on another source of income: earnings from endowment. Statistics on endowment income are notoriously slippery because of all kinds of conceptual and definitional problems, but it takes no great degree of sophistication --- or even consistency in accounting --- to recognize the negative effects of prevailing business conditions on income from endowment. In the case of Princeton, endowment income as traditionally defined to include only dividends and interest earned on investments has risen at an average annual rate of about 5% for a good many years. Now, however, we are forced to anticipate an appreciably slower rate of increase (about 2½% for the year ending in June 1975 and an actual decline in the next year). Corporate dividend growth has slowed markedly and some reductions in dividends are occurring. In addition, interest rates are now declining after hitting all time highs in 1974 (when they were counteracting to some extent slower growth in dividends). Hence we cannot expect the rate of growth in endowment income over the next few years to keep pace with normal rates of increase in expenditures, let alone the inflationary rates of the last few years.

The situation is even more difficult for institutions that, for entirely defensible reasons, have been including in endowment income some part of the long-term capital appreciation on their portfolios. When income from endowment is determined by a total return formula which is geared in some way to the market value of the portfolio, the kinds of declines we have seen in the prices of securities have a direct effect on spendable income. The result can be --- and has been in the case of a number of institutions --- either an actual decline in the contribution of endowment income to the current budget or the erosion of the principal of the

endowment fund, or both. Under these circumstances it is hard not to worry about the long-term ability of endowment funds to generate the ever-increasing amounts of income that are going to be needed in the future as expenses continue to rise.

Declines in the market value of portfolios have also meant declines in the value of funds set aside as reserves, and unfortunately it has been necessary for a great many colleges and universities to dip into such funds in order to pay their bills. And of course at a time when security prices are depressed it is necessary to liquidate more units of endowment (or of funds functioning as endowment) to satisfy any given dollar obligation.

The last source of income which I want to mention, and I shall do so only briefly, is gifts from private sources. The Council on Financial Aid to Education reports that while many donors are aware of the plight of higher education, and the need to give generously to both private and public institutions, it has simply not been possible to increase giving enough to keep up with inflationary trends. Here again the combination of inflationary pressures on the economic position of donors, reductions in the real income of many people, and a depressed stock market have taken their toll. Moreover, the needs of other worthy causes, accentuated by many of the same pressures affecting higher education, have also helped to make this one of the most difficult periods in memory in which to try to raise money for higher education.

Let me now try to conclude this all too superficial enumeration of the effects of current economic conditions on sources of revenue by reemphasizing what seems to me to be the one central characteristic of this period: what has made the recent inflation so extraordinarily destructive of the finances of colleges and universities is that it has not been accompanied by any of the offsets that we might have expected. On the basis of what all of us were taught --- and perhaps even thought we knew --- we could have expected rising prices to be accompanied by more rapid increases in money incomes than we have experienced, by rising rather than falling securities prices, and by quite significant increases in the revenues received by state governments as well as by the federal government. And these developments in turn should have made it at least somewhat easier to raise tuition, to increase income from endowment and from gifts, and to benefit

from increased governmental appropriations. It is the absence of these offsets --- and the presence in so many instances of their obverse --- that makes this such an extraordinarily difficult and threatening period for all of higher education.

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I view our situation in rather stark terms in part because I have high expectations for our institutions; I do think that we have to aspire to do a good deal more than just survive. To be sure, it is difficult to measure how well, or how poorly, colleges and universities are meeting qualitative standards. Thus, it is all too easy for there to be a slow, unspectacular, perhaps even for a time unnoticed, decline in the quality of the education that we offer and the scholarship and research that we undertake. I wish I thought we were further away from such an outcome than I do after considering the implications of actions that a number of our institutions are in fact being forced to take right now in adjusting to economic realities.

I worry too about preserving access to higher education, and not just to higher education generally but to all kinds of colleges and universities for young people from every background and income level. Attaining this objective is important not just for the individuals, not just for the institutions, but for the society as a whole.

There are no simple or quick solutions to any of these problems, but there are things that can be done. It seems to me, for example, that a relatively modest national program of competitive fellowship awards could help appreciably in sustaining high quality graduate education. Also deserving of serious consideration are the proposals advanced recently by the Carnegie Council on Policy Studies in Higher Education, including the proposal to which I referred earlier that funds be provided to offset in part the higher tuitions that private institutions are forced to charge. Discussions are under way in Congress now on student aid proposals of several kinds, and I am sure there are a large number of other positive actions at both state and federal levels that deserve careful thought.

Plainly those of us with operating responsibilities in our own colleges and universities have a clear obligation to do all in our power to achieve every reasonable economy. And I believe we have an equally clear obligation to make the case for all of higher education, not just our own institution or our own kind of institution, as we try to encourage greater private as well as public support.

Trustees and Regents have a major role to play here too. In particular, I think it is important for members of governing boards to make a special effort to prevent the difficult financial problems we face from exacerbating conflicts of all kinds --- within and between institutions. This period of severe financial difficulty is bound to create a great many stresses and strains, and yet we have to maintain a milieu in which students, members of the faculty and staff, alumni, Trustees, Regents, and legislators retain a sense of shared commitment to common educational goals. That is not going to be easy. But if we fail to maintain a spirit of genuine cooperation and good will, the "cost" to higher education is not going to be measured in dollars alone. I believe strongly that the sense of academic community is related directly to the educational purposes that we serve.

Nor can we afford, philosophically or economically, to have the public and private sectors of higher education divided and divisive. The strength of American higher education depends now, as it has for many years, on a distinctive pluralism. There is too much for all of us to accomplish, in complementary ways, for us to allow the economic pressures which all of us confront to do anything but encourage us to work together.